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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/686,641
Filing Date: October 10, 2000
Appellant(s): MITTAL ET AL.

Mohammad S. Rahman
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/11/07 appealing from the Office action mailed 10/21/04.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct. However to clarify, claims 1-61 were rejected in the final office action mailed 10/21/04.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. However, because the examiner agreed that the after final amendments would be entered upon appeal, the claim scope has changed somewhat since the final rejection. Although Official Notice was taken previously (and now represented by newly cited references), it was not taken on subject matter present in every claim. In addition, there is the New Ground of Rejection discussed below:

NEW GROUND(S) OF REJECTION

Claims 20-24 and 26-37 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,513,016	FREENY, JR.	1-2003
5,890,138	GODIN ET AL	3-1999
6,497,360	SCHULZE, JR.	12-2002
5,857,175	DAY ET AL	1-1999

Hirshleifer, "Price theory and applications", second edition, Prentice Hall, 1980, pps 132-135.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-5, 8, 9, 12, 17, 18, 20-24, 27, 28, 31, 36, 37, 39-43, 46, 47, 50, 55, 56, 58-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeny, Jr (US6513016) in view of Godin et al (US5890138) and Schulze, Jr. (US6497360).

Regarding claims 1, 4, 5, 20, 23, 24, 39, 42, 43, Freeny, Jr teaches a computerized system that monitors sales, demand and inventory supply and dynamically adjusts pricing. The system enables advertising/promotional pricing using coupons that can be printed for customers and redeemed. The coupon system generates coupons that are dynamically priced as determined by the system [abstract, 4:4-11, 6:32-37, 7:35-37, 11:16-27]. The coupon system is taken to be

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electronic as the coupon data is stored on the computer and can be electronically changed.

Further, the coupons include UPC codes which are electronically scanned upon redemption.

While Freeny, Jr teaches different sales data sources as inputs to the price determination system, he does not teach the use of auction data. Godin et al teaches an online computer auction system which is used to sell goods. Godin et al teaches that a benefit of the auctions is the ability to track the price/demand nature of the product. This provides valuable information to the manufacturer. Instead of detailed testing, businesses can use auction data to determine price and demand information for specified products and a price demand curve can be created [7:60-8:5]:

(19) Another feature of the auction system is the ability ***to track the price demand nature of the product. This provides valuable marketing information to the manufacturer.*** For example, in trying to determine the response at different prices, companies have to conduct various tests. In contrast ***with the auction system as shown a lot of information regarding price and demand is immediately known.*** The relationship between this type of purchasers and the average purchaser can then be applied to provide a conventional price demand curve for the particular product. ***It can readily be appreciated that the computer system provides the demand price curve.***

It would have been obvious to one of ordinary skill at the time of the invention to have looked to any source of pricing/demand data as an input to the system of Freeny, Jr, including the auction-based data of Godin et al in order to create promotional pricing based upon a rich collection of price/demand data thereby creating more effective promotional pricing. Regarding the auction-related parameters comprising “non-quantitative attributes,” Godin et al teaches the collection and storage of user data such as name, address, city, province, postal code, email address, telephone. This data is used in the online auction process. Each of these is taken to be a “non-quantitative attribute of a bidder.” While postal code and telephone fields each comprise numeric digits, the data is numeric code representing qualitative information such as the general

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area of location (area code) or more specific area of location (postal code). Area codes and postal codes are often classified as demographic data and are taken to be qualitative. Even though this data is stored using digits, the information is not quantitative and it would never be used in arithmetic calculations as quantitative values (such as price, tax rates, etc) would be. Nonetheless, a person's name is clearly non-quantitative and represents a cultural attribute of that person. A person's city is non-quantitative and represents a cultural attribute of that person. Culture is such a broad term that any characteristic can be used to define a "culture"; the types of people using American Express cards can be said to belong to a credit card culture different than Visa card holders. The type of credit card is non-quantitative data. The "for getting market information" language found in system claim 1 is taken to be functional language and intended use and does not provide a positive limitation. Nonetheless, the combination provides an auction process and system for getting market information (price/demand data) so that promotional pricing can be dynamically created in the form of coupons. This creation of and reliance upon the price-demand relationship is taken to provide a "statistical" means for generating discount coupons (discount is a promotion scheme parameter) for different market segments where each product or product type represents a market segment. Neither Freeny, Jr. nor Godin et al appear to teach the feedback of coupon redemption data in order to "learn, adapt and improve" the system. Schulze, Jr teaches an electronic coupon promotional system where coupon redemption data is used as an input to the coupon system in order to provide a feedback loop to improve the system [abstract]:

Method and apparatus for accurately **collecting and promptly reporting information in connection with the redemption of manufacturer coupons** are provided. The method includes the collection of information from a retailer point-of-sale system, and **the examination of redeemed coupons**. Where matches

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between product sales, discounts to consumers and redeemed coupons can be made, payment to the retailer of discounts extended to consumers in exchange for manufacturer authorized coupons is immediately made following such verification. In addition, ***information concerning the redemption of coupons is made available to manufacturers to enable them to adjust promotions to achieve the desired marketing effect.*** The apparatus of the present invention may comprise a central processing unit and attached peripherals capable of interfacing with a retailer point-of-sale system and downloading information from the point-of-sale system, together with secure storage for holding coupons that are to be verified by the apparatus.

It would have been obvious to one of ordinary skill at the time of the invention to have fed back the results of the coupon system of Freeny, Jr/Godin et al as a closed loop system in order to improve results and provide a system that "learns" in a manner as desired by Schulze, Jr.

Regarding claims 2, 3, 17, 21, 22, 36, 40, 41, 55, it would have been obvious to one of ordinary skill at the time of the invention to have electronically captured valuable auction data input for any well known auction types (applicant and Godin et al recognize the prior existence of various auction types such as Dutch auction, reverse auction, etc), so as to base pricing on a wide range of data in an automated manner.

Regarding claims 8, 27, 46, promotion coupon and advertising campaigns typically include such claimed parameters and it would have been obvious to one of ordinary skill at the time of the invention to have provided them in order to provide an effective promotion.

Regarding claims 9, 28, 47, the auction data represents a population of consumers who have interest in a product and would pay at least zero price for it – uninterested people do not bid. The purchases (winning bids) represent points on the price-demand curves and each purchase helps tell the story about the quantity or demand at each of those prices. These winning bids represent the fraction of all bids and are taken to represent fractional demand (number of

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purchases divided by all those interested). A product of (this fraction of the bidders who win) X (the interested population) = the number of winners or purchases – this value is taught by the combination simply by the notion to create a price-demand curve.

Regarding claims 12, 31, 50, plural auctions for different products inherently define different segments based on the product type. A marketer could define segments in any imaginable way for a plurality of products.

Regarding claims 18, 37, 56, selecting and providing the suggested auction-data input to the computerized pricing system functionality in order to output pricing decision and actions is taken to allow a user to “configure” the data sources. The user implementing/building/programming the system of Godin et al determines which bidder data fields are required to use the auction system.

Regarding claim 58, the system is taken to inherently “learn” about online markets by mining information from current and past operations of similar online markets.

Regarding claim 59, Freeny, Jr teaches that the system monitors inventory levels and can adjust pricing accordingly. This is taken to provide optimal inventory management.

Regarding claims 60, the proposed combination provides an online electronic coupon generation system.

Regarding claim 61, it would have been obvious to one of ordinary skill at the time of the invention to have sold the valuable marketing research to other firms so that they may use the same techniques to price, promote and sell their products.

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Claims 7, 14-16, 26, 33-35, 45, 52-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeny, Jr (US6513016) in view of Godin et al (US5890138), Schulze, Jr. (US6497360) and Hirshleifer (“Price theory and applications”, second edition, Prentice Hall, 1980, pps 132-135.)

Regarding claims 7, 16, 26, 35, 45, 54, the combination proposed above contemplates the use of auction data in order to analyze the price-demand relationship in order to trigger price changes via coupon discounts. Hirshleifer teaches optimal pricing analysis using price-demand curves. The slope of the demand curve reveals the relationship between price and demand, however the units of measurement used for price and demand affect the overall magnitude of the slope. Hirshleifer in particular teaches the need for studying the “price elasticity” which is the proportional change in quantity demanded divided by the proportional change in price [pps 132-133] which enables one to study the relative relationships without consideration for the measurement units. It would have been obvious to one of ordinary skill at the time of the invention to have studied the *elasticity* of demand by studying the proportional changes of quantity vs. price as suggested by Hirshleifer. The coupons triggered by Freeny, Jr. are taken to represent a determination that a product is “amenable to price discrimination”. The auction/sales data used (representing many transactions) is taken to represent a plurality of data sources. Further, the price demand curves inherently associate quantities demanded and price, for a collection of individual buyers.

Regarding claims 14, 33, 52, using auction data as sales data as an input into Freeny, Jr.’s system is taken to provide including winning bids in all of the auctions. The highest bids of all the bidders is taken to be the winning bids.

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Regarding claims 15, 34, 53, the demand curves taught by Freeny, Jr are based on the results of the sales for a plurality of products and a plurality of quantities.

Claims 10, 11, 13, 29, 30, 32, 48, 49, 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeny, Jr (US6513016) in view of Godin et al (US5890138), Schulze, Jr. (US6497360) and Day et al (US5857175). Day et al teaches that it is generally well known for retailers or manufacturers to offer coupons in order to encourage switching from a competitors brand (such switching is taken to also provide on product substitution as in claim 10) or to encourage quantity purchases (taken to be “up selling”). Such would have been obvious to have employed with the combination in order to accomplish particularly desired sales.

NEW GROUND(S) OF REJECTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 20-24 and 26-37 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Based on Supreme Court precedent a method claim must (1) be tied to another statutory class of invention (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing (see at least *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88

(1876)). A method claim that fails to meet one of the above requirements is not in compliance with the statutory requirements of 35 U.S.C. 101 for patent eligible subject matter. Here claims 20-24 and 26-37 fail to meet the above requirements.

(10) Response to Argument

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The "motivation-suggestion-teaching" test asks not merely what the references disclose, but whether a person of ordinary skill in the art, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims. See *In re Leonard R. Kahn* (CAFC, 04-1616, 3/22/2006).

References are selected as being reasonably pertinent to the problem based on the judgment of a person having ordinary skill in the art. *Id.* ("[I]t is necessary to consider 'the reality of the circumstances,'-in other words, common sense-in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor." (quoting *In re Wood*, 599 F.2d 1032, 1036 (C.C.P.A. 1979))).

Applicant argues that one of ordinary skill represents an Information Systems programmer. Examiner believes that at the time of the invention, an ordinarily skilled individual in such an area could have an MBA as well as programming skills. This was a common mix of skills at the time of the invention. Further, even an individual with ordinary business skills who lacked the needed programming skills would have found it obvious and would have capably assembled the necessary functionality of such a business system. "As a general rule, where software constitutes part of a best mode of carrying out an invention, description of such a best mode is satisfied by a disclosure of the functions of the software. This is because, normally, writing code for such software is within the skill of the art, not requiring undue experimentation, once its functions have been disclosed. . . . [F]low charts or source code listings are not a requirement for adequately disclosing the functions of software." *Fonar Corp.*, 107 F.3d at 1549, 41 USPQ2d at 1805.

Applicant argues that one of ordinary skill would not be capable of arranging a system that accessed different auction *sites*. Applicant's claim 2 does not require the auction types to be from different sites, but rather simply different *types*. Further, applicant argues the disclosure of collecting auction data from various auctions from their start to end as an "overwhelming achievement" beyond one of ordinary skill. However, the pertinent disclosure (spec, page 18, 3rd ¶) merely states the desire to collect information from different types of auctions – there is no particular disclosure regarding any details of how this is accomplished. Examiner did not raise enablement issues regarding this disclosure for the reason that one of ordinary skill would be capable of collecting this data and feeding it into the system using routine experimentation.

Freeny, Jr teaches the use of sales data as input to a dynamic pricing system. Godin et al teaches that auction sales data is quite valuable for creating marketing information because demand-price curves can be created from the raw sales data. One of ordinary skill would have recognized the value in providing auction sales data as an input to the dynamic pricing system of Freeny, Jr. One of ordinary skill contemplating Freeny, Jr's automatic dynamic coupon pricing system would also have recognized the benefits of feeding back the coupon redemption data into the automatic and dynamic pricing system so as to enable the system to adapt in the same manner as proposed by Schulze, Jr.

Applicant argues that Godin et al does not teach non-quantitative attributes comprising cultural attributes of bidders. Cultural is such a broad term and many levels of "culture" can be said to exist for different types of people. Applicant acknowledges that Godin et al relies on information such as credit card number, user's names, address and email address for the auction system, yet applicant inexplicitly labels these as "quantitative". Yes, the credit card number is made up of digits, but such a number is (at least in part) a collection of meaningful codes. Further, no mathematical operations are done on credit card numbers. Same reasoning applies for a user's email or address – numbers may be present, but this data is surely non-quantitative. jsmith27@yahoo.com is non-quantitative. Applicant has failed to provide any sound reasoning to show otherwise. This limitation is present in Godin et al as detailed above. Applicant argues further that none of the bidder attributes are used to provide targeted advertising. Applicant's claims only require the non-quantitative attributes to be used when conducting auctions – they are never put to use by the claims subsequent to the auction process. The "for getting market information" language of claim 1 is taken to be functional language and intended use and does

not provide a positive limitation. Nonetheless, the combination provides an auction process and system for getting market information (price/demand data) so that promotional pricing can be dynamically created in the form of coupons. There is no linkage in the claims between the bidder's cultural attributes and the generated coupons, although applicant appears to argue such a requirement. Lastly, cultural attributes of bidders are believed to be present in the auction system as explained above. For example, auction bidders buying antique clocks certainly represent a different culture of bidders compared to those bidding on skateboards – each cultural group having “patterns of knowledge, belief and behavior” consistent with applicant's provided exemplary definition from Merriam-Webster's.

Applicant argues that the art does not teach coupon parameters for market segments. As stated in the action, a product promoted by a discount coupon is taken to represent a market segment. While a product is taken to represent a product market segment in itself, purchasers of products such as infant formula also can be said to represent a market segment.

Applicant argues that Freeny, Jr provides a pricing system based on purchasing trends, yet the claimed invention uses market data to establish coupon parameters. Applicant continues by stating that the establishment of pricing structures for various goods is a different concept than generating coupons based on market demand. Examiner frankly fails to see any particular differences. Freeny, Jr's sales data provides demand data (POS market data) which is used to establish coupon-based pricing.

Applicant argues with respect to claim 17 that while Godin et al references dutch auctions, he does not state that his system can work with dutch auctions. Applicant argues that Godin et al merely references different auction types rather than teaches them to be used. The

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types of auctions claimed are both well known and recognized by Godin et al. One of ordinary skill would have found it obvious to have included demand data from any well known style of auction including those as claimed.

Applicant argues that none teach the elements of claim 3, yet provides no specific reasoning why the examiner's rejection is deficient.

Regarding claim 5, applicant argues that the art fails to teach opening price and decrements. The claim does not positively require Dutch auctions to be present – “in the case of” is taken to introduce essentially optional language. Further however, these known elements of dutch auctions are captured in order to conduct such an auction and would have been obvious to have analyzed as demand data, although the claim does not require these features to be relied upon in the pricing analysis.

Applicant argues that the taking of Official Notice must be supported by evidence. Examiner took Official Notice in an action previous to the final action which went unchallenged in applicant's response of 6/28/2004. Applicant's point that the examiner failed to seize the opportunity and present evidence with the Advisory Action of 1/7/2005 appears to be moot without any seasonable challenge having been presented. Nonetheless, examiner has further provided evidence and integrated it into the rejections previously made of record so as to fill in the gaps of the applied evidence.

Examiner has corrected his statement that Freeny, Jr teaches price elasticity based on the results of the “auctions” – indeed the examiner has consistently held that Freeny, Jr does not teach auctions, but rather “sales” data.

As stated above with regard to “fractional demand” of claim 9, the auction data proposed represents a population of consumers who have interest in a product and would pay at least zero price for it – uninterested people do not bid. The purchases (winning bids) represent points on the price-demand curves and each purchase helps tell the story about the quantity or demand at each of those prices. These winning bids represent the fraction of all bids and are taken to represent fractional demand (number of purchases divided by all those interested). A product of (this fraction of the bidders who win) X (the interested population) = the number of winners or purchases – this value is taught by the combination simply by the notion to create a price-demand curve.

Applicant argues that none teach the elements of claim 18, yet provides no specific reasoning why the examiner’s rejection is deficient.

Applicant argues (claim 8) that the combination does not address market segments. As stated earlier, a product promoted by a discount coupon is taken to represent a market segment. While a product is taken to represent a product market segment in itself, purchasers of products such as infant formula also can be said to represent a market segment.

Applicant argues (claim 58) that the art fails to learn about online markets by mining information. Examiner continues to assert inherency. The history of online auction data to be used with Freeny, Jr’s system provides mining of online market information whereby the dynamic pricing component learns what price to output. Further, the inclusion of Schulze, Jr. to use coupons redemption data as feedback to improve the system provides further learning.

Applicant argues (claim 59) that “optimal inventory management” does not refer to price adjustments according to inventory levels. Examiner believes the teachings of the combination

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meet the claim language as reasonably interpreted. Applicant's alternate examples of "optimal inventory management" which presumably are lacking in the combination do not prevent the noted features in the art from being an example within the scope claim language.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section (9) above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR

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41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

Jeffrey D. Carlson /Jeffrey D. Carlson/
Primary Examiner, Art Unit 3622

Conferees:

Eric Stamber/E. W. S./
Supervisory Patent Examiner, Art Unit 3622

Vincent Millin /VM/
Appeals practice Specialist



A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:



WYNN W. COGGINS
TECHNOLOGY CENTER DIRECTOR